

REGIONAL DIVERSIFICATION OF THE EFFECTS OF SUPPORT FOR AGRICULTURAL PRODUCER GROUPS IN POLAND

REGIONALNE ZRÓŻNICOWANIE EFEKTÓW WSPARCIA GRUP PRODUCENTÓW ROLNYCH W POLSCE

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Abstract. The aim of the article is the analysis of quantitative data describing groups of agricultural producers operating under the conditions of Poland's membership in the EU. Their number was analyzed according to the creation periods, i.e. in the years 2004-2013 and 2014-2017, the type of activity broken down into plant products and animal products, paid out amounts under measure 142 - Agricultural Producers Group [measure 142] of the Rural Development Programme. The voivodship dominating the market in terms of absorption of support and the degree of market concentration were determined using the Herfindahl-Hirschman index [HHI]. In terms of region, the phenomenon of significant diversification of farmers' participation in horizontal integration processes within agricultural producer groups was observed. Most groups of agricultural producers were established in the Wielkopolskie voivodship, and the least in the Małopolskie voivodship, where it is the most fragmented in the country. High activity of farmers in establishing agricultural producer groups implied obtaining high amounts of support from EU funds. Farmers from the Wielkopolskie, Dolnośląskie and Opolskie voivodships achieved a dominant position on the market in the absorption of funds as part of the 142 PROW action among all voivodships in Poland. In total, they acquired nearly half of all funds [47%]. The degree of market concentration in terms of absorption of EU funds determined using the Herfindahl-Hirschman index was moderate, as it amounted to 1220. It was therefore a level that did not threaten the competition processes in applying for EU support for agricultural producer groups.

Keywords: groups of agricultural producers, agriculture, effects, EU subsidies, regional diversity

Streszczenie. Celem artykułu jest analiza absorpcji środków finansowych oraz proces powstawania grup producentów rolnych funkcjonujących w warunkach członkostwa Polski w UE w ujęciu regionalnym. Analizowano ich liczbę wg okresów utworzenia, tj. w latach 2004-2013 oraz 2014-2017, rodzaj prowadzonej działalności z podziałem na produkty roślinne i produkty zwierzęce, wypłacone kwoty wsparcia w ramach działania 142 – Grupy Producentów Rolnych [działanie 142] Programu Rozwoju Obszarów Wiejskich. Określono województwa dominujące na rynku pod względem absorpcji wsparcia oraz stopień koncentracji rynku wykorzystując indeks Herfindahla–Hirschmana [HHI]. W ujęciu regionalnym zaobserwowano zjawisko znacznego zróżnicowania uczestnictwa rolników w procesach integracji poziomej w ramach grup producentów rolnych. Najwięcej grup producentów rolnych powstało na terenie województwa wielkopolskiego, najmniej zaś na terenie województwa małopolskiego, gdzie rolnictwo jest najbardziej rozdrobnione na tle kraju. Wysoka aktywność rolników w tworzeniu grup producentów rolnych implikowała uzyskanie wysokich kwot wsparcia ze środków unijnych. Rolnicy z województwa wielkopolskiego, dolnośląskiego oraz opolskiego uzyskali dominującą pozycję na rynku w absorpcji środków pieniężnych w ramach działania 142 PROW spośród rolników z wszystkich województw w Polsce. Łącznie pozyskali blisko połowę całości środków [47%]. Stopień koncentracji rynku w zakresie absorpcji unijnych środków określony za pomocą indeksu Herfindahla–Hirschmana był umiarkowany, wynosił bowiem 1220. Był to więc poziom nie zagrażający procesom konkurencji w aplikowaniu o wsparcie unijne dla grup producentów rolnych.

Słowa kluczowe: grupy producentów rolnych, rolnictwo, efekty, dotacje unijne, regionalne zróżnicowanie

Introduction

The agriculture development conditioning is changing dynamically both all over the world as well as in the countries of the European Union. As Kowalczyk and Sobiecki (2014) indicate, *“currently, the most crucial determinant of changes in agriculture in those countries, including Poland, is globalisation processes. Globalization forms a new economic order based on market mechanism dominance on an international scale”*. Since only producers with a sufficient development potential can be independent in the market, it is essential for them to cooperate with each other under such conditions, especially producers with smaller production resources and, consequently, smaller agricultural production. The EU Common Agricultural Policy (CAP) enables agricultural producers to establish institutionalised cooperation within agricultural producer groups. The cooperation between farmers seems to be reasoned as due to it they may decrease uncertainty related to management processes in agriculture concurrently increasing competitiveness and thus increasing market advantage over competitors. Moreover, as a result of indicated effects, farmers gain an opportunity to increase their obtained income. Therefore the cooperation between farmers is definitely desirable as it provides them with an opportunity for the improvement of their economic standard. Because of those reasons, agricultural organizations representing farmers' interests – such as Cogeca – call for further reinforcement and support of a farmer position in a food production chain

Material and methods

The aim of the article is to analyse quantitative data describing agricultural producer groups operating under conditions of membership of Poland in the EU. Their number has been analysed according to their period of establishing i.e. 2004-2013 and 2014-2017, the production type [i.e. plant products, animal products], and paid-out amount of financial support as a part of Measure 142 – Agricultural Producer Group [Measure 142] of the Rural Development

Results and discussion

The globalisation effects on agro-food economy intensified in the last two decades of the 20th century. The dynamic growth of globalisation significance in an agro-food sector is still being observed, which is fostered by changes in the Common Agricultural Policy focusing more and more on liberalization of economy processes. It stems from the fact, that the European Union in the Agenda 2000 following the negotiations

(Agricultural Cooperatives in Europe, 2010, 2014). The matter is an object of interest. Ministers of agriculture in the extended Visegrad Group - GV4+3ⁱ - participating in the International Food Fairs Warsaw Food Expo 2017 were also in favour of support of farmers during the conference on the future of the Common Agricultural Policy after 2020 (i – The countries in the Visegrad Group extended with Bulgaria, Romania and Slovenia). It was stated then that a new policy was necessary to strengthen the position of farmers in a food production chain, especially in relations with huge retail chains (Wspólna Deklaracja..., 2017).

The main premise for supporting farmers in horizontal integration processes as a part of “Agricultural Producer Groups” is reinforcing their competitive advantage in a primary production sector through the common cooperation. Farmers establishing a group may, first of all, adjust production better to market requirements of agricultural produce receivers, introduce it together to the market and by centralising a market offer they can contact wholesalers directly. That activity is the farmers' reaction to an existing market weakness of an agricultural production organisation field. The participation in an agricultural producer group lets an individual farmer contact directly entities processing agricultural goods omitting middle men. In that manner farmers may build directly their competitiveness in the agricultural market. Their actions of establishing competitiveness potential are backed by the European Union funding for agricultural producer groups (Raport, 2014, s. 19-20).

Programme. Predominating voivodships in terms of the funds' absorption and the market concentration degree were determined using the index of Herfindahl–Hirschman [HHI]. Its value was calculated using the following formula: $HHI = \sum_{i=1}^N u_i^2$, where u_i means the voivodship market share. A value lower than 1000 means low concentration, the one exceeding 1800 is high concentration, whereas values ranging from 1000 to 1800 mean moderate concentration.

within the WTO acknowledged that the main aim of the CAP was to raise competitiveness of agriculture both internally and externally (Adamowicz, 2008). In that manner, agro-food economy is being increasingly exposed to international clear market mechanisms. Consequently, the global “opening” of the agro-food sector to eliminate barriers impeding allocation of production factors, production as well as agricultural produce and food products' distribution

occurred. Simultaneously, producers need to struggle with challenges such as increasing unification and rapid standardization of production methods and also consumption patterns. As a result of dynamic changes in global economy, also in the agro-food sector, the following effects can occur:

- growing price competition at the level of a standard quality or, in other words, mass products, which can particularly result in bankruptcy of some farms or smaller enterprises which in a short term will not be able to adjust to standards and a cost level on the global market,
- the necessity to take consolidation steps in order to improve effectiveness of conducted activities as soon as possible, and
- an increased role of network systems of a global range operating not only in terms of purchase but also agricultural produce processing, contributing in that manner to creating and forming global business networks aiming at a complete cover of the market with a given product line.

Considering the omnipresence market globalisation at almost all business levels, market participants and especially producers are facing new challenges. Moreover, inevitability of global changes leads to a point where it is essential to take suitable adjusting measures in order to be able to meet emerging challenges. From the perspective of agricultural producers as product suppliers to a processing sector, probably the biggest challenge is a matter of monopolisation and monopsonisation of the most profitable sectors. As a result, resources and/or economic surplus are transferred from producers to processors which are often processing companies or huge sales networks of a character of transnational corporations (Sobiecki 2007).

The globalisation processes in agriculture itself develop mainly through market liberalisation by internationalisation of food markets and agribusiness concentration, in particular agro-food industry and agriculture support. Proceeding agriculture globalisation and deregulation of trade restrictions serve interests of huge transnational corporations. Such corporations control international food trade and influence more and more a type and structure of agriculture (Adamowicz, 2008).

Under conditions of developing globalisation, agriculture is more and more dependent on international competition; therefore it must be more and more effective. There is a risk that in countries of low agriculture effectiveness it may be marginalised significantly (In Kowalczyk and Sobiecki's opinion, according to the European Economic-Social Committee under conditions of microeconomic globalisation, there is a permanent risk of the future of so-called the European Agriculture Model in which certain effectiveness limitations are allowed, which is obviously unfavourable in terms of agriculture competitiveness, more: *Europejski Model Rolnictwa – uwarunkowania*

ewolucji, Kowalczyk, Sobiecki (2014). Due to the universalism of globalisation processes Polish agriculture has become part of an open global economic system. Moreover, since the moment of the Polish access to the European Union it has also started participating in Union agriculture. Therefore Polish agriculture may actively participate and be provided with the Union instruments of support of its modernisation processes. As it is pointed by Adamowicz (2008), „*processes of agriculture modernisation in Poland following the example of Western Europe had begun before the transformation whereby years of transformation initially brought its inhibition to some extent. General effectiveness of material expenditures in Poland is evidently lower than in leading EU countries. That lower productivity and effectiveness resulted from weak links and unsatisfactory precision of applied technological processes, the lack of modern farming support by agricultural policy*”. One of the possible activities enhancing productive and economic situation of farmers is their participation – but greater than up to now – in activities leading to strengthening relations with the market. Under the EU CAP and deploying the Rural Development Programme, the important activity enabling farmers to improve their competition position on the market is to gain support for agricultural producer groups. Horizontal integration of agricultural producers in food production chain plays a crucial role in rationalisation of production and sale of agricultural products (Chorób 2008, Korczak and Tomaszewski, 2016). Nowak and Gąsior (2017), and Szpon (2007), Borecka and Sowula-Skrzyńska [2009] indicate “*Integration of agricultural producers becomes more significant in a long-term period since – as research proves – it facilitates implementation of new production technologies, improvement of product quality and economic effects of farming and also strengthening the market position of individual entities*”. Prior to the Polish access to the EU it had been diagnosed that agricultural producers operating in model terms under perfect competitiveness conditions, unfortunately, had a weaker position in comparison to other agribusiness and economy links (Piwowar, 2003). Therefore it is vital to combine a market offer of a bigger number of farms since it leads to intensification of their economic power reinforcing their negotiating position with agricultural produce receivers. Such combination of a market offer of a bigger number of farms often results in forming new market and distribution channels which for individual farms operating on a smaller scale has not been available before (Kisiel-Knoblach, 2004). Market reality forces farms to adapt to market economy challenges and to the unified European market. They also implicate creation of integration relations between them, whereby they may take various forms and occur in various pace. The basic form of integration relation observed in agriculture is

horizontal integration in the form of agricultural producer groups.

The interest of farmers in participation in horizontal integration processes within agricultural producer groups changed in consecutive periods (Figure 1). In Poland at the end of the third quarter 2017, 1011 producer groups operated (It is a smaller number of groups than the ones which gained support under the Framework 2007-2013, since their number was 1389. It means that some agricultural producer groups were disbanded by their members, probably when the financial support from European Union funds under Measure 142 was discontinued). They were established in various periods of Polish membership in the European Union. The number of agricultural producer groups established in the first period of Polish membership in the EU, covering years 2004-2006, and which still operated in 2017 was only 23. In the structure of general producer groups they amounted for 2.3% of their whole population. The biggest number of agricultural producer groups was established under the Financial Framework 2007-2013, and their considerable part continued operating also in 2017. There were 810 such entities and they constituted 80% of population of agricultural producer groups operating in 2017. Remaining groups were set up under the Framework 2014-2020, there have been 178 entities up to date, i.e. 17.7% of the general number. The number of agricultural producer groups selling animal products was prevailing (Figure 2). That phenomenon was of a permanent character as groups of that type prevailed both in periods 2004-2013 and 2014-2017, and their total number was 644 farming entities. Groups selling plant products were established more rarely. Their total number was 367 farming entities. It means that the number of agricultural producer groups dealing with animal production was higher by more than 75% comparing with groups operating within plant production.

There were considerable differences between voivodships in terms of the number of operating agricultural producer groups (Figure 3). The biggest number of groups was established in Wielkopolskie voivodship which on the map of Poland is an unquestionable leader in that respect. To the end of 2013 with the funding from the Rural Development Programme 2004-2006 and the Rural Development Programme 2007-2013 there were established 272 groups in total. Moreover, other 40 groups were established under the Rural Development Programme 2014-2020. Farmers set up 312 agricultural producer groups in Wielkopolskie voivodship. It can be concluded that nearly a third of agriculture producer groups established so far in Poland operate in Wielkopolskie voivodship. The great interest of farmers in establishing producer groups occurred also in Opolskie voivodship – 91 groups, Dolnośląskie – 81 groups, Mazowieckie – 75 groups and Kujawsko-Pomorskie – 72 groups. Involvement of farmers in establishing

agricultural producer groups in Świętokrzyskie voivodship looked completely different. In that case on the basis of available data it can be stated that farmers established only 8 agricultural producer groups. In Poland it reflected the lowest level of interest in market self-organization processes among farmers. Moreover, in Świętokrzyskie voivodship, farmers have not established any agricultural producer groups using funding under the Rural Development Programme 2014-2020. It needs to be emphasised that such a situation has not occurred in any other voivodships. Such a state of affairs shows exceptionally well an agricultural weakness in Świętokrzyskie voivodship.

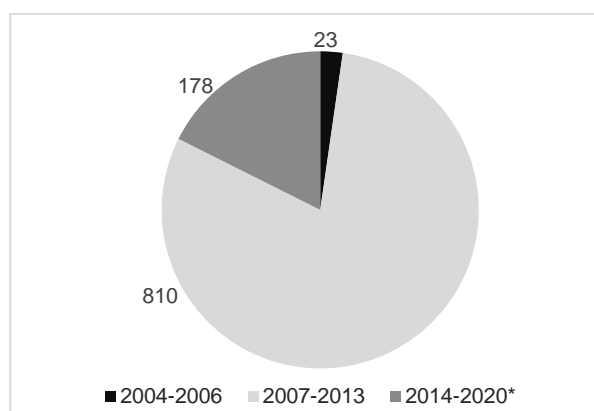


Figure 1. The number of registered agriculture producer groups

Source: own work on the basis of *Informacja zarządcza ARiMR*, data as of 30.09.2017.

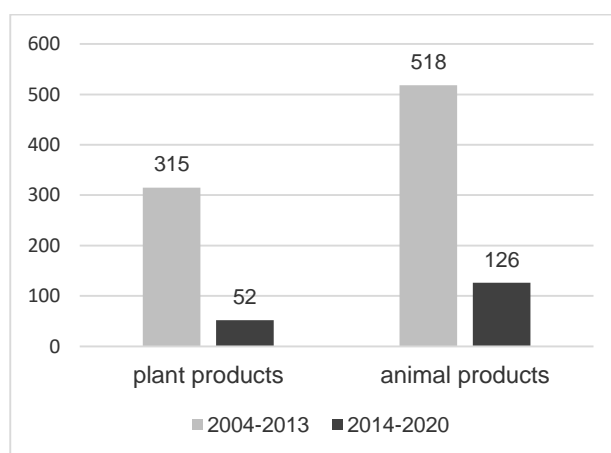


Figure 2. Agriculture producer groups by the type of their activity

Source: own work on the basis of *Informacja zarządcza ARiMR*, data as of 30.09.2017.

[Łódzkie, Podlaskie, Świętokrzyskie and Śląskie voivodships] where due to many reasons farmers are not keen on organizing themselves in groups. It is influenced mainly by farmers' mentality, their uncertainty and unwillingness to act collectively" (Sprawoz-

danie 2007). On the other hand, it is worth emphasising a certain breakthrough in terms of an interest of some farmers in participating in strengthening processes of their market position on a highly competitive agro-food market in Poland. It seems that the crucial change in perception of benefits arising from participation of farmers in horizontal integration processes within agricultural producer groups occurred among farmers from Łódzkie voivodship. It stems from the fact that with the funding from the Rural Development Programme 2014-2020, farmers from Łódzkie voivodship established the biggest number of agricultural producer groups. There were 53 entities out of 178 newly established then in Poland therefore their share was 30%. It appears that such a key change of interest and participation in integration processes of farmers from Łódzkie voivodship resulted primarily from new knowledge obtained during trainings organized by the Ministry of Agriculture and Rural Development in the previous Financial Framework for years 2007-2013 (See: The report on execution of activities under the Rural Development Programme for years 2007-2013 – annual, for the period 01.01.2007 – 31.12.2007, pp. 20-21).

The data in Table 2 shows that each among 1214 (175 producer groups operating in other agricultural producer branches than listed in Table 2 were omitted as data on the number of decisions granted payments) groups granting funding under the Rural Development Programme 2007-2013, applied for it three times on average. Thereby, they are going to gain funding under the Rural Development Programme 2014-2020 during the following years as payables from the previous period. The average value of turnover gained from selling agricultural products by an

agricultural producer group accounted for nearly PLN 20 million [PLN 19.5 million] during the period of funding, therefore PLN 6.5 million annually (It is an estimated value being the quotient of a turnover value PLN 19.5 million by 3 – the number of decisions about granted financing). Assuming that an agriculture producer group may gain funding for the period of five years of operating on the market, it can be assumed that an average sales volume from an agricultural producer group was PLN 1.3 million (The value estimated on the basis of research results included in the Final Rapport on Research – *Ocena efektów wsparcia udzielonego wsparcia w ramach działania 142 – Grupy Producentów Rolnych PROW 2007-2013*, p. 15). It was a volume twenty-five times higher comparing to an average volume of goods production in a statistical farm in Poland in 2015.

In years 2007-2015, agriculture producer groups established under the Financial Framework 2007-2013 received total funding of PLN 873 million (Figure 5). As far as regions are concerned, distribution of funds was diversified significantly (Figure 6). Producer groups from Wielkopolskie voivodship were characterised by the highest absorption of funds, the value of funding was PLN 237 million, and the lowest from Małopolskie voivodship – only PLN 5 million. Farmers from Wielkopolskie voivodship received nearly fifty-fold higher funding in comparison to farmers from Małopolskie voivodship. The state of affairs resulted mostly from significantly bigger number of agricultural producer groups operating in Wielkopolskie voivodship.

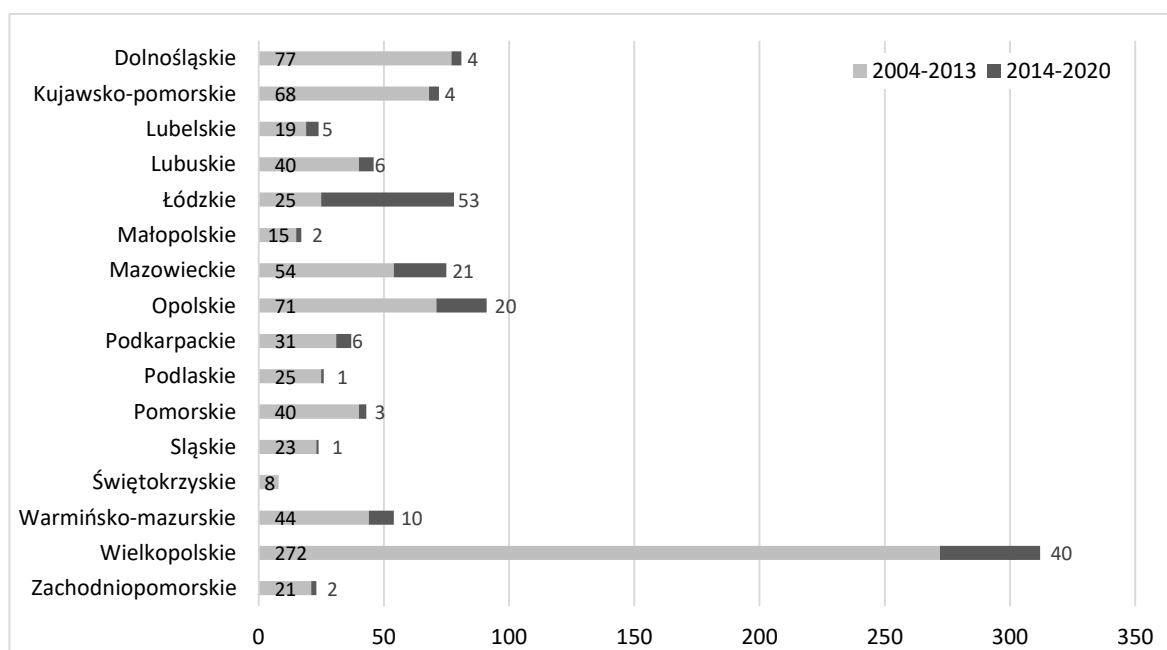


Figure 3. Agricultural producers groups based on voivodships
Source: own work on the basis of *Informacja zarządcza ARIMR*, data as of 30.09.2017.

Table 2. Selected characteristics of agriculture producer groups gaining financing under the Rural Development Programme 2007-2013

Itemisation	The number of groups [number]	Decision of granting payment [number]	Turnover value [mln PLN]
Cereal grain and oil plant seeds	313	984	
Fowl, poultry or edible offal	303	845	
Pigs and pork	304	807	
Cereal grain	105	303	27 123
Cow, sheep or goat milk	105	289	
Oil plant seeds	84	263	
Other branches of agriculture production	175	-	
Total	1389	3491	27 123

Source: The report on execution of activities under the Rural Development Programme for years 2007-2013 – annual, for the period 01.01.2007 – 31.12.2007, p. 56.

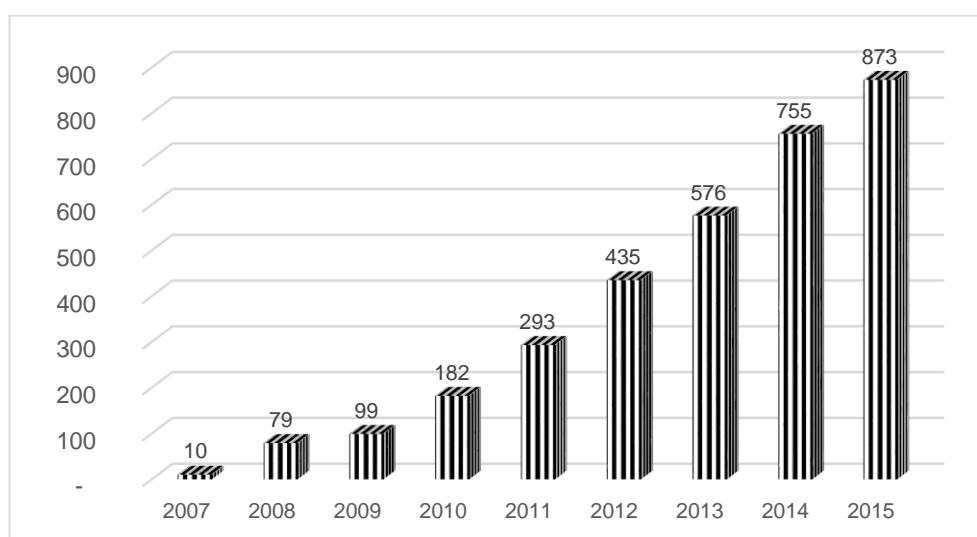


Figure 5. The amounts of funding paid out to agricultural producer groups in Poland [PLN million, incrementally during the following years]

Source: own work on the basis of *Informacja zarządcza ARiMR*, data as of 30.09.2017.

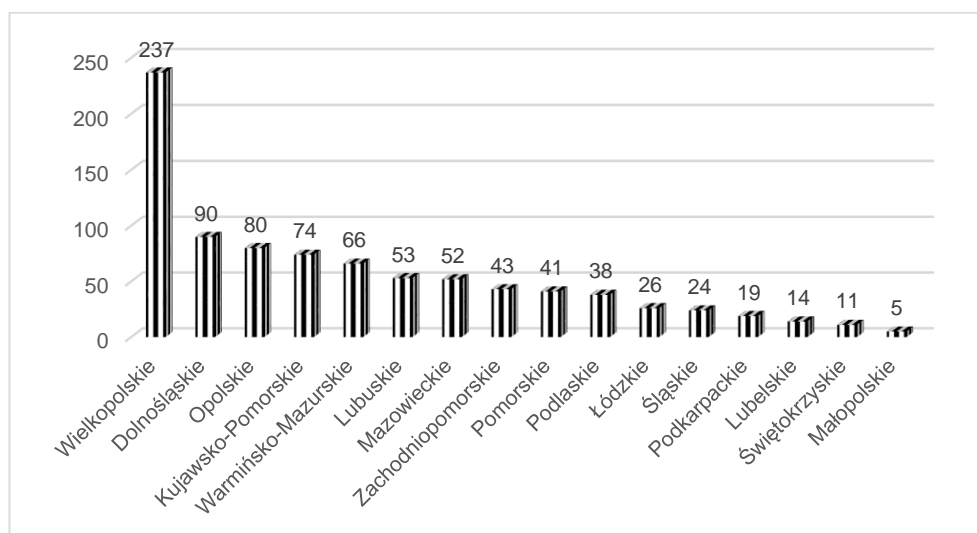


Figure 6. Regional diversification of funding for agricultural producer groups in Poland [2015, PLN million]

Source: own work on the basis of *Informacja zarządcza ARiMR*, data as of 30.09.2017.

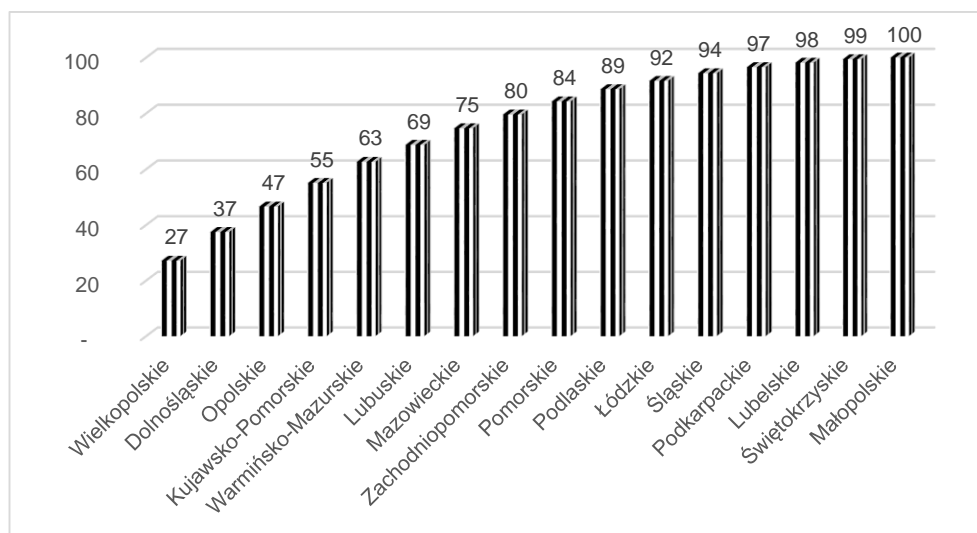


Figure 7. Concentration of funding for agricultural producer groups by voivodships [2015, incrementally, %]
Source: own work on the basis of *Informacja zarządcza ARiMR*, data as of 30.09.2017.

Moreover, it can be indicated that on the market there is a phenomenon of a predominant position of some voivodships over the remaining ones (Figure 7). Such a position was gained particularly by three voivodships, namely: Wielkopolskie, Dolnośląskie and Opolskie. Their combined share in funding absorption was 47%, therefore it exceeded a cut-off level of 40% characteristic for a dominant position on the market. The market concentration degree in terms of absorption of funding for agricultural producer groups determined using the index of Herfindahl–Hirschman needs to be considered as a moderate one as its value amounted for 1220. Admittedly, a predominant position of three voivodships on the market in terms of the absorption of European Union funds was a fact. However, they have not managed to gain a significant market advantage in comparison to other market participants so far, similar to oligopoly at least.

Conclusions

In Polish agriculture, a factor strongly threatening its competitiveness under unified European market conditions is a huge fragmentation of an area structure of farms. Cooperation of farmers on the market is beneficial for them since it allows them to adjust production better to current needs of the market.

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Therefore, participation in horizontal integration processes within agricultural producer groups gives an opportunity to enhance market competitiveness of farms. Unfortunately, a phenomenon of a considerable diversification of participation of farmers in horizontal integration processes within agricultural producer groups was observed on a regional basis. The biggest number of agricultural producer groups has been established in Wielkopolskie voivodship, whereas the smallest – in Małopolskie voivodship which is the most fragmented one in Poland. Consequently, farmers from Wielkopolskie voivodship constituted that part of agricultural producers who undertook tasks building actively their position on the market. Farmers' involvement from Wielkopolskie voivodship into establishing agricultural producer groups translated into the highest level of funding for them. Along with farmers from Dolnośląskie and Opolskie voivodships, they reached a dominant position in absorbing funds under the Rural Development Programme, Measure 142. Despite the prevailing position on the market of the pointed voivodships, the market concentration degree in terms of absorption of European Union funds within the above mentioned mechanism determined by the index of Herfindahl–Hirschman needs to be assumed as moderate therefore not threatening competitiveness processes in applying for funding for agricultural producer groups.

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